

ABSTRACT OF THE DISCLOSURE

An optical fiber capable of compensating in the L-band both the chromatic dispersion and dispersion slope of a positive-dispersion optical fiber, an optical transmission line incorporating the optical fiber, and an optical communications system incorporating the optical transmission line. An optical communications system 1 comprises an optical transmission line 10, an optical transmitter 20, and an optical receiver 30. The optical transmission line 10 comprises an optical fiber 11 and an optical fiber 12 that are mutually fusion-spliced. The optical fiber 12 has at a wavelength of 1,590 nm a chromatic dispersion, D_2 , and a dispersion slope, S_2 , that satisfy the formulae $-200 \text{ ps/nm/km} \leq D_2 \leq -50$
 5 ps/nm/km, and $0.009 \text{ /nm} \leq S_2/D_2$.
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